

REMARKS

Claims 1-23 are pending. In the Office Action mailed March 22, 2003, the Examiner rejected claims 1, 2, 4-8, 13, 15-16 and 19-22 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,930,707 ("Vambaris") in view of U.S. Patent No. 6,266,514 ("O'Donnell") and U.S. Patent No. 6,295,460 ("Nagel"). The Examiner rejected claim 3 under 35 U.S.C. 103(a) as being unpatentable over Vambaris, O'Donnell and Nagel in further view of U.S. Patent No. 5,875,398 ("Snapp"), and the Examiner rejected claims 9-12, 14, 17-18 and 23 under 35 U.S.C. 103(a) as being unpatentable over Vambaris, O'Donnell and Nagel in further view of Agilent Technologies Wireless Network Installation & Operations Brochure. Finally, the Examiner objected to claim 14. Applicant traverses these rejections and objection for the following reasons.

I. Response to Objection to Claim 14

Claim 14 is directed toward a monitoring method for a wireless communications network, and it is a dependent claim that adds the additional element of "entering into an agreement with an owner or operator of the vehicle, establishing that the vehicle will carry the combination around the geographic area." The Examiner objected to this element as having no bearing on the invention. Specifically, the Examiner inquired how this requirement could be enforced and why wouldn't the invention work if placed in a vehicle under no agreement.

Applicant respectfully submits that this is simply an additional element describing one aspect of Applicant's invention, and it is a proper dependent claim. In response to the Examiner's inquiries, claim 14 can be enforced in a variety of different ways. For example, if the individual carrying out the method described in independent claim 2 and the intervening

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dependent claims additionally contracts with the owner of the vehicle to carry the combination of equipment around a geographic area, then that individual would be liable for direct infringement of claim 14 as well as independent claim 2 and the intervening dependent claims. The owner of the vehicle might additionally be liable for contributory infringement of claim 14. The relative difficulty of enforcing an otherwise proper claim would not be a basis for rejecting that claim. And, while the invention would work if placed in a vehicle under no agreement, Applicant respectfully submits that this again is not the test of whether a dependent claim is proper.

Therefore, Applicant requests that the Examiner withdraw his objection to claim 14.

II. There is No Motivation to Combine the References Cited by the Examiner

The Examiner rejected independent claims 1, 2, 15 and 16 based, at least in part, on the combination of Vambaris, O'Donnell and Nagel. Specifically, Applicant submits that there is no motivation to combine Vambaris with O'Donnell and Nagel in order to make the modifications suggested by the Examiner. Accordingly, since there is no motivation to combine these references in the manner asserted by the Examiner, Applicant respectfully asserts that the Examiner has failed to make a prima facie case of obviousness with respect to these independent claims and the independent claims, along with their dependent claims, are therefore allowable.

Applicant's claim 1, for example, is directed toward a method for monitoring a wireless communication network. The method includes operating a first mobile station function to establish diagnostic data concerning the operation of a wireless network; operating a location-determining mechanism to establish location data corresponding to the diagnostic data; and operating a second mobile station to communicate the diagnostic data and location data to a remote entity via a communication path comprising an air interface.

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In one embodiment, the first mobile station function is a first mobile station and the second mobile station function is a second mobile station. The method may then be carried out by moving the first mobile station around a coverage area of the wireless network. The first mobile station communicates with the wireless network in order to establish diagnostic data about the wireless network. The location-determining mechanism establishes location data, such as the location of the first mobile station at the time it establishes the diagnostic data, corresponding to the diagnostic data. The second mobile station then communicates the diagnostic data and the location data to a remote entity via an air interface.

Thus, the first mobile station communicates wirelessly with the wireless network to establish the diagnostic data throughout the coverage area of the wireless network, and the second mobile station wirelessly sends the diagnostic data to a remote entity. As described in Applicant's application, one use of this method might be to map out the relative signal strengths or other diagnostic data at various locations within the coverage area of the wireless network in order to determine how changes in topography affect the operation of the wireless network. This is merely one example and Applicant's specification describes other embodiments and uses as well.

In rejecting the independent claims, the Examiner relied on Vambaris along with a combination of other references. Vambaris is directed toward a system for remotely testing a base transceiver station. As described in Vambaris, "a lightly loaded remote BTS may appear quiescent to a central monitoring position either because of an absence of traffic or because of a fault at a station. There is thus a need to be able to initiate a test when a BTS appears inactive to determine whether the BTS is faulty or not." Col. 1, lines 12-18. Thus, Vambaris is concerned only with determining whether a BTS is operational at all.

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In order to test whether a BTS is just inactive or not operational, a test transceiver 3 can communicate wirelessly with the BTS 2. Col. 2, lines 27-30; Fig 1. A test unit 4 connected to the transceiver 3 can cause the transceiver 3 to establish a connection with the BTS 2. Once the connection is established, a test tone is wirelessly sent from the BTS 2 to the transceiver 3 and in turn to the test unit 4. If the test unit 4 does not receive the tone within a predetermined amount of time (e.g., if the BTS 2 is not operational), then the test unit 4 generates and stores an error signal. Col. 3, lines 3-10. The process is repeated, and if the error rate exceeds a predetermined threshold, the test unit 4 notifies a central control station 1 via a wired link. Col. 3, lines 3-10.

The Examiner asserts that Vambaris teaches Applicant's element of "operating a mobile station function to establish diagnostic data concerning operation of a wireless network." The Examiner then acknowledges that Vambaris does not teach or suggest "operating a location-determining mechanism to establish location data corresponding to diagnostic data" or "operating a second mobile station to communicate the diagnostic data and location data to a remote entity via a communication path comprising an air interface." In order to find these missing elements, the Examiner turns to O'Donnell and Nagel respectively.

With regard to O'Donnell, the Examiner asserts that it would have been obvious to one of ordinary skill in the art to modify Vambaris to include the use of GPS as described in O'Donnell or in Applicant's disclosure. However, Vambaris' described purpose of testing whether the BTS is not operational or just inactive can be achieved by having the test unit 4 communicate with the BTS. In order to establish whether the BTS is inoperable or just inactive, it would not be necessary for the test unit 4 to additionally provide its GPS location to the BTS or other network elements involved in the test. Thus, there is no reason to modify Vambaris in the manner suggested by the Examiner to add the GPS capability of O'Donnell.

Moreover, the test unit 4 is positioned at a fixed location – as evidenced by the wired connection 54 between the test unit 4 and the BTS 2. Since the test unit 4 is positioned at a fixed location and is not moveable, it would be illogical to modify Vambaris to add the GPS capability described in O'Donnell so that the position of the test unit could be tracked at various locations in the wireless network. Therefore, there is again no incentive to modify Vambaris in the manner suggested by the Examiner with O'Donnell.

With regard to Nagel, the Examiner asserts that it would have been obvious to one of ordinary skill in the art to replace Vambaris' wired link with Nagel's wireless link to provide the user with the ability to roam freely during communications. As previously described, Vambaris' test system is for the purpose of determining whether a BTS is not operational or just inactive. In order to test whether the BTS is operational, it would only be necessary for Vambaris' test system to be located somewhere within the range of the BTS. There would accordingly be no need to move the test system to various locations within the coverage area of the wireless network, and therefore there would be no incentive to replace the wired link with a wireless link in order to make the test system mobile.

Moreover, Vambaris describes that the wired link 54 is used to report errors to a central control station when the error rate exceeds a predetermined threshold (e.g., when the BTS is inoperable). If the wired link in Vambaris were replaced with a wireless link, then the test unit would not be able to report errors to the central control station when the BTS is inoperable. That is, the inoperability of the BTS would render the test unit unable to communicate wirelessly. However, this is specifically the time that Vambaris describes the test unit 4 should report the errors and hence the inoperability of the BTS to the central control station. Thus, not only is there no incentive to modify Vambaris to replace its wired link with a wireless link, doing so

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would frustrate Vambaris' purpose of reporting an alarm signal to a central control station when the BTS is inoperable and therefore unable to support wireless communications. As MPEP § 2143.01 describes, "if [the] proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification."

Finally, Applicant notes that the Examiner suggests that one skilled in the art knows that during a cell phone call, the MSC queries the HLR (or VLR) to determine the location of the cell phone, and therefore Vambaris inherently determines the location of the test transceiver based on a test call being made in the network. However, any location information obtained by the MSC during a call from the HLR or VLR is not transmitted wirelessly to a remote entity and certainly not transmitted wirelessly along with corresponding diagnostic data. Therefore, Vambaris fails to teach or suggest "operating a second mobile station to communicate diagnostic data and location data to a remote entity via a communication path comprising an air interface," as is claimed by Applicant.

For the foregoing reasons, Applicant respectfully submits that there is no motivation to combine Vambaris with O'Donnell and Nagel in the manner suggested by the Examiner, and therefore the Examiner has failed to make a prima facie case of obviousness. Accordingly, independent claims 1, 2 and 15-16 are allowable along with dependent claims 3-14 and 17-23.

III. Conclusion

In conclusion, Applicant submits that the cited references, either alone or in combination, do not anticipate or render obvious Applicant's invention. Therefore, Applicant submits that the

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application is in condition for allowance. If any questions or issues remain, the Examiner is invited to contact Applicant's attorney, Brian Harris, at his direct dial number of (312) 913-3303.

Respectfully submitted,

**MCDONNELL BOEHNEN
HULBERT & BERGHOFF LLP**

Date: 6/9/04

By: 

Brian R. Harris
Registration No. 45,900

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